Cisco TelePresence Video Communication Server

Figure 1. Cisco TelePresence Video Communication Server

Product Overview

The Cisco TelePresence® Video Communication Server (Cisco® VCS) is deployed as either a Control Expressway server, or as a Starter Pack Express.

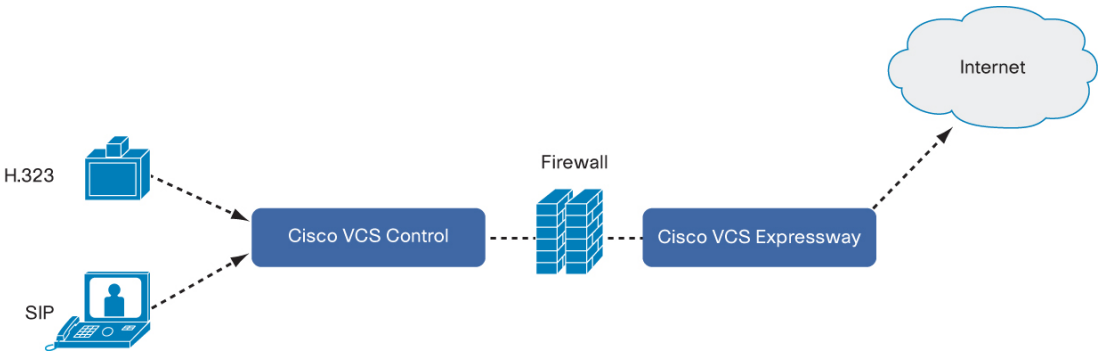
Cisco TelePresence Video Communication Server Control

Cisco TelePresence Video Communication Server Control (Cisco VCS Control) provides Session Initiation Protocol (SIP) proxy and call control as well as H.323 gatekeeper services. The center of the intelligent video communication network, the Cisco VCS Control application connects all infrastructure, management, and endpoint devices and is critical to interoperability with unified communications and IP telephony networks and voice-over-IP (VoIP) devices (Figures 1 and 2).

Cisco TelePresence Video Communication Server Expressway

Cisco TelePresence Video Communication Server Expressway (Cisco VCS Expressway) opens the world outside the firewall to organizations using video communications (Figures 1 and 2). Cisco VCS Expressway enables business-to-business communications, empowers remote and home-based workers, and allows service providers to provide video communications to customers. Cisco VCS Expressway provides standards-based and secure firewall traversal for SIP and H.323 devices, and the Cisco VCS enables communication with the outside world regardless of SIP or H.323 protocol.

Figure 2. Communication Outside the



Cisco TelePresence Video Communication Server Starter Pack Express

Cisco TelePresence Video Communication Server Starter Pack Express (Cisco VCS Starter Pack Express) is an all-in-one solution targeted to customers who are deploying a small to medium-sized Cisco TelePresence solution for the first time. The Cisco VCS Starter Pack Express provides immediate access to Cisco TelePresence Movi licenses, basic management and provisioning, as well as a scaled-down Cisco VCS Expressway solution for firewall traversal and business-to-business communications.

Features and Benefits

Table 1 summarizes the key features of the Cisco TelePresence Video Communication Server Expressway.

Table 1. Cisco TelePresence Video Communication Server Expressway Feature Summary

Feature	Benefit
Design features	• Designed to work with any H.323 or SIP device • Appliance-based architecture that enables easy deployment and high reliability • Designed to work with any firewall • Full multivendor support • Secure and reliable • One-rack-unit (1RU) rack-mountable • Dual network interface option available
Features of Cisco VCS Control	• H.323 gatekeeper • SIP Proxy and SIP Registrar • Flexible zone configuration with named zones and default zone • Support for inter- and intrazone bandwidth control • IPv4 and IPv6 translation services • Policy engine for processing calls • Uniform Resource Identifier (URI) and electronic number mapping (ENUM) dialing • Device authentication using H.235 and SIP digest authentication • Embedded setup wizard for easy installation • SIP Presence Server and User Agent • Cisco TelePresence FindMe • Cisco TelePresence Multiway
Features of Cisco VCS Expressway and Cisco VCS Starter Pack Express	• Network Address Translation (NAT) traversal functions that enable secure traversal of any NAT firewall • Registration of traversal-enabled endpoints • Session Traversal Utilities for NAT STUN) discovery and STUN relay services • Firewall traversal H.460.18/19 compliant, including support for multiplexed media • Firewall traversal STUN compliant • Ability to traverse any number of firewalls • Policy engine for processing calls • URI and ENUM dialing • Device authentication using H.235 • Embedded setup wizard for easy installation • SIP Presence Server and User Agent
Performance features of Cisco VCS Control	• Supports up to 2500 registered devices and 100 concurrent traversal calls • Supports up to 1000 neighboring zones (traversal zones included) • Supports Secure HTTP (HTTPS), Secure Shell (SSH) Protocol, and secure copy (SCP) for secure management • Uses CompactFlash for critical storage and a hard drive for other functions • Supports clustering of up to six Cisco TelePresence VCSs, increasing capacity and redundancy
Performance features of Cisco VCS Expressway	• Supports up to 2500 registered devices and 100 concurrent traversal calls • Enables URI dialing for massive scalability • Supports HTTPS, SSH, and SCP for secure management • Uses CompactFlash for critical storage and a hard drive for other functions • Supports clustering of up to six Cisco TelePresence VCSs, increasing capacity and redundancy • Supports standards-based traversal using Relay NAT (TURN) server; support providing Interactive Connectivity Establishment (ICE)-enabled devices with Firewall and NAT traversal

Feature	Benefit
Performance features of Cisco VCS Starter Pack Express	• Supports up to 50 registered devices and 50 concurrent traversal calls • Offers basic provisioning and management capabilities for Cisco TelePresence Movi, Cisco TelePresence System EX Series, and Cisco IP Video Phone E20 • Enables URI dialing • Supports HTTPS, SSH, and SCP for secure management • Uses CompactFlash for critical storage and hard drive for other functions • Supports standards-based TURN server, supporting ICE-enabled devices with Firewall and NAT traversal

Product Specifications

Table 2 lists the physical specifications and Table 3 gives network, security, and management specifications for the Cisco TelePresence Video Communication Server Control and Expressway.

Table 2. Product Specifications

Feature	Specification	
Product compatibility	• Compatible with any standards-compliant H.323 or SIP video conferencing or telepresence device	
Capacity	Cisco VCS Control and Expressway • Up to 2500 registrations • Up to 500 nontraversal calls • Up to 100 traversal calls • Up to 1000 sub-zones • Up to 1000 neighbor zones	Cisco VCS Starter Pack Express • Up to 50 registrations • Up to 50 nontraversal calls • Up to 50 traversal calls
Cisco VCS main features (Control and Expressway)	• SIP and H.323 support, including SIP/H.323 gateway for locally registered endpoints • IPv4 and IPv6 support, including IPv4 and IPv6 Interworking • SIP and H.323 interworking for nonregistered endpoints • Bandwidth management on both a per-call and a total-usage basis, configurable separately for calls within the local subzones and to neighboring systems and zones • URI and ENUM dialing through Domain Name System (DNS), enabling global connectivity • Automatic down-speeding option for calls that exceed the available bandwidth • Flexible zone configuration with prefix, suffix, and regular expression support • Ability to function as a standalone Cisco VCS or be neighbored with other systems such as Cisco VCSs, border controllers, gatekeepers, and SIP proxies • Ability to be clustered with up to five other Cisco VCS peers for capacity and redundancy purposes • Name clusters for ease of management and deployment • Optional endpoint authentication • Control over which endpoints are allowed to register • Administrator policy including support for Call Processing Language (CPL) • Embedded setup wizard through a serial port for initial configuration • System administration through a web interface or RS-232, Telnet, SSH, and HTTPS • Static NAT support (requires dual network interface option)	
Optional features	• Cisco TelePresence FindMe (user policy) • SIP/H.323 interworking for nonregistered endpoints • Dual network interface • Cisco TelePresence Multiway • Cisco TelePresence Management Suite agent • Microsoft Office Communications Server 2007 Enhanced Interoperability option • Advanced Account Security Joint Interoperability Test Command(JITC) (available with vX6.1 or later)	
Architecture	• Secure appliance-based architecture • Flash memory and hard drive • ITU-T H.323v6 compliant • ITU-T H.225v6 compliant • Cisco TelePresence Expressway technology • H.460.18/.19 compliant • H.460.18-client proxy support • Support for H.460.19 multiplexed media	

Feature	Specification	
Reliability	• Registrations can survive system restart • Start-up time is fast • The solution offers configuration replication for clusters • The Cisco VCS Expressway process recycles within seconds • Cisco VCS Expressway supports H.225 Alternate Gatekeeper	
Call control and registrations	• Supports manual registration of H.323 and SIP endpoints and application-programming-interface (API) call control • Supports H.225/Q.931, H.245 call control routed mode, and non-call routed mode • Supports H.323-SIP Interworking Encryption • Supports H.323-SIP Interworking DuoVideo • Supports registration of H.323 ID and E.164 aliases and services • Supports Unicode (UTF-8) registration for global implementation • Supports disconnect H.323 calls from the API interface • Supports URI dialing • Supports direct call signaling among neighbored Cisco VCSs, border controllers, and gatekeepers • Supports Call Policy Management (RFC 3880), including Call Policy and User Policy (Cisco TelePresence FindMe) • Supports conference hunting for multipoint-control-unit (MCU) cluster support • Supports call routed mode • Supports call loop detection mode	**Cisco VCS Control and Expressway:** • Up to 100 traversal calls • Up to 100 services for a single device • Up to 2500 registered Cisco VCS Expressway devices **Cisco VCS Starter Pack Express:** • Up to 50 traversal calls • Up to 100 services for a single device • Up to 50 registered Cisco VCS Expressway devices
Zone control Cisco VCS	• Supports remote zone monitoring • Supports remote zone redundancy • Supports up to 200 neighbor zones (including Cisco VCSs, border controllers, gatekeepers, and SIP proxies) • Supports sub-zone area definition for bandwidth management • Supports flexible zone configuration with named zones and default zone • Supports forwarding of requests to neighbor zones (including VCSs, border controllers, gatekeepers, and SIP proxies) • Supports registration control (open, specifically allow, and specifically deny)	
Bandwidth management	• Interzone - definable call-by-call ◦ Maximum bandwidth per call ◦ Maximum aggregate bandwidth for all neighboring zones • Intrazone - definable call-by-call ◦ Maximum bandwidth per call ◦ Maximum aggregate bandwidth • Auto-down-speeding if call exceeds per-call maximum • Gateway load balancing • Automatic network failover • Capacity warnings for users and administrators	
Language	• English • Multiple language support on the Cisco VCS web interface; language packs will be available for download in the future	
Physical dimensions (H x W x D)	• 1.72 x 16.8 x 9 in. (43.5 x 426 x 457.2 mm) • 1RU rack-mount chassis	
Weight	• 8kg (unpacked)	
Power	• Auto-sensing 250W (maximum) 580 BTU/hr power supply • 90-264 VAC full range @ 47-63 Hz	
Cooling system	• Six 40-mm fans for system cooling	
System control and indications	• One power LED • One alarm LED • One power on/off switch (rear) • Four act/link/10/100/1000 LEDs on Ethernet ports	

Feature	Specification
Environmental data	• Operating temperatures: 32 to 104°F (0 to 40°C) • Storage temperatures: -4 to 140°F (-0 to 80°C) • Relative humidity: 10 to 90% (noncondensing)
Certification	• LVD 73/23/EC • EMC 89/366/ECC  • VCS Version X5 is ICSA Labs Certified
Awards	 
Approvals and compliance	• Directive 73/23/EEC (Low Voltage Directive) ◦ Standard EN 60950 • Directive 89/336/EEC (EMC Directive) ◦ Standard EN 55022, Class A ◦ Standard EN 55024 ◦ Standard EN 61000-3-2/-3-3 • Approved according to UL 60950 and CAN/CSA C22.2 No. 60950 • Complies with FCC15B Class A • Joint Interoperability Test Command (JITC)

Table 3. Network, Security, and Management Specifications

Network	• Supports DNS addressing • Supports IPv4 and IPv6 simultaneously • Provides IPv4 and IPv6 translation services
Interfaces	• Four 10/100/1000 BASE-TX Ethernet ports (RJ-45) (front) • One RS-232 console port (RJ-45)2 (front)
Supported RFCs	• RFCs 2543б, 3261б, 3264б, 1889б, 3265б, 3325б, 3515б, 3891б, 3892б, 2327б, 4566, and 5626
Firewall traversal	• STUN discovery and STUN relay services • Firewall traversal H.460.18/19 compliant, including support for multiplexed media • Firewall traversal STUN compliant • ICE
Security	• Secure management with HTTPS, SSH, and SCP ◦ Secure file transfer ◦ Inactivity timeout • Ability to lock down IP services • Authentication required on HTTP(S), Telnet, SSH, SCP, and serial port • Cisco VCS Expressway compatible with H.235 v2- and v3-enabled H.323 devices • H.235 authentication support • Transport Layer Security (TLS) for SIP signaling • Roles-based password-protected GUI user access • Ability to enforce strict passwords • Ability to disable root access over Telnet of SSH
Management	• Support for industry standards such as RS-232, Telnet, HTTP(S), XML, Simple Network Management Protocol (SNMP), SCP, and SSH • Embedded setup wizard on serial port for initial configuration • Advanced management support and configuration with Cisco TelePresence Management Suite 12.0 or later • Call logging and diagnostics • Support for logging to a syslog server • Local time zone aware • Port usage tool

Warranty Information

Find warranty information on Cisco.com at the Product Warranties page.

Ordering Information

To place an order, visit the Cisco Ordering Home Page and refer to Table 4 or contact your local Cisco representative. To download software, visit the Cisco Software Center.

Table 4. Ordering Information

Product Name	Part Number
Cisco TelePresence Video Communication Server Control	CTI-VCS-BASE-K9
Cisco TelePresence Video Communication Server Expressway	CTI-VCS-BASE-K9
Cisco TelePresence Video Communication Server Starter Pack Express	CTS-VCS-STPAK-K9

Cisco Services

Cisco and our partners provide a broad portfolio of intelligent, personalized services and support that can help you realize the full value of your Cisco TelePresence investment by increasing business agility and network availability. This portfolio of services accelerates business innovation through a network-based collaboration platform that enables businesses to collaborate anywhere, anytime. For more information about these services, please visit: http://www.cisco.com/go/telepresenceservices.

For More Information

For more information about the Cisco TelePresence Video Communication Server, please visit http://www.cisco.com/go/telepresence or contact your local Cisco account representative or authorized Cisco partner. Product specifications are estimates and subject to change without notice.

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